REMARKS

Claims 1-12 and 24-27 are rejected under 35 U.S.C. § 112, first paragraph, as being unpatentable for failure to comply with the written description requirement; claims 1, 3-7, and 11 are rejected under 35 U.S.C. § 102(b) as being anticipated by United States Patent Number 5,688,192 to Aoyama (hereinafter "Aoyama"); claims 1, 3, 4, 6, 7, 9-12, and 24-27 are rejected under § 103(a) as being unpatentable over International Patent Publication Number WO 95/09034 to Mills et al. (hereinafter "Mills") in view of United States Patent Number 4,154,789 to Delacoste (hereinafter "Delacoste"); claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Mills in view of Delacoste and Aoyama; claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Mills in view of Delacoste and United States Patent Number 5,091,265 to Kennedy et al. (hereinafter "Kennedy"); claims 9, 26, and 27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Aoyama; and claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Aoyama in view of Kennedy.

Claims 1, 3-12, and 24-27 are currently pending and presented for reconsideration. In view of the following remarks, reconsideration and withdrawal of all grounds of rejection are respectfully requested.

1. Claims 1-12 and 24-27 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Applicant respectfully traverses the rejection. In addition, claim 2 was cancelled in the Amendment and Response filed on March 3, 2003, thereby rendering the rejection moot with respect to claim 2.

The Office action states that "the specification fails to set forth that the spherical bodies within the matrix material are resilient," and that although the specification describes the

properties of the microspheres, it fails to disclose specifically that the microspheres are resilient. Applicant respectfully submits that the specification, as filed, specifically discloses in at least three places that the microspheres are, in fact, resilient. First, the specification states ***"Specifically, the problems underlying the invention are solved by a ball, in particular by a soccer ball, whose outer skin includes a syntactic material. Syntactic materials are mixtures that consist of a matrix material into which essentially dimensionally stable, resilient bodies are dispersed."*** See, page 3, lines 14-17, of Applicant's Specification.

Second, the specification further states that the spheres are ***"on the one hand compressible and, on the other hand, assume their original shape again as soon as the pressure acting upon them diminishes."*** See, page 3, lines 26-27, of Applicant's Specification. The specification discloses that the microspheres are compressible; compressible microspheres capable of resuming their shape are, by definition, resilient. Specifically, "resilience" is defined as the "[a]bility of a strained body, by virtue of high yield strength and low elastic modulus, to recover its size and form following deformation." MCGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS 1693 (5th ed. 1994).

Third, Applicant respectfully submits that claim 2 of the application, as filed January 29, 2001, disclosed that the spherical bodies within the matrix material are resilient. Claim 2 of the January 29, 2001, application stated ***"A ball according to claim 1 wherein the syntactic material comprises a plurality of resilient spherical bodies dispersed in a matrix."*** As stated in 35 U.S.C. § 112, second paragraph, "The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." Accordingly, the claims constitute part of the specification. Since the original

claim filed states that the ***"syntactic material comprises a plurality of resilient spherical bodies,"*** Applicant respectfully submits that the specification discloses at least three times that the material is resilient.

For all the foregoing reasons, Applicant respectfully submits that the specification discloses that the spherical bodies are resilient and, therefore, there is unambiguous support in the specification for pending independent claim 1, which recites an outer skin that ***"comprises a plurality of resilient spherical bodies dispersed in a matrix material."***

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of independent claim 1 under 35 U.S.C. § 112, first paragraph. Because claims 3-12 and 24-27 depend, either directly or indirectly, from independent claim 1, Applicant respectfully submits that these claims are patentable as well.

2. Claims 1, 3-7, and 11 are rejected under 35 U.S.C. § 102(b) as being anticipated by Aoyama. Applicant respectfully traverses the rejection.

Briefly, Aoyama describes a solid construction golf ball having a core comprised of compressible material. Specifically, Aoyama describes a golf ball that comprises a multi-layered core, wherein compressible microspheres are inserted into the outer core layer. See generally, column 3, lines 2-5, of Aoyama.

In order for a claim to be anticipated under 35 U.S.C. § 102(b), the invention must be "patented or described in a printed publication in this or a foreign country . . . more than one year prior to the date of the application for patent in the United States." 35 U.S.C. § 102(b). Applicant respectfully submits that Aoyama is not a prior art reference under 102(b), because Applicant claims priority under 35 U.S.C. § 119(a) to DE19732824.5 filed on July 30, 1997 in

Germany. Specifically, Aoyama has a reference date of November 18, 1997, the date on which the patent issued, which is over three months after Applicant's priority date. Since Applicant claims priority to a foreign application dated July 30, 1997, Aoyama fails to be a reference dated "more than one year prior to the date" of Applicant's application for invention. Accordingly, Applicant respectfully submits that Aoyama is not a prior art reference under 102(b).

Assuming, arguendo, that Aoyama is prior art under § 102(b), which it is not, to establish that a prior art reference anticipates a claim under 35 U.S.C. § 102, each and every limitation of the claim must be found in a single reference. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegall Bros. V. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the . . . claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). See also, MPEP § 2131.

Applicant respectfully submits that Aoyama fails to meet the "every element" standard with respect to independent claim 1. Applicant's independent claim 1 recites ***"A ball comprising an outer skin, the outer skin including a first layer which includes a syntactic material."*** In contrast, Aoyama does not teach or suggest this same structure.

Specifically, Aoyama describes a golf ball construction that consists of a compressible core. See, Aoyama, column 1, lines 56-59. In particular, Aoyama states that "compressible materials of this invention can be incorporated into the entire core or into at least one layer of the core." See, Aoyama, column 3, lines 1-5. In Aoyama, FIGS. 1 and 2 are each a cross-sectional view of the claimed golf ball. In one embodiment, Aoyama discloses that the core 2 is molded

over by a cover 3. The multi-layered core 2 is comprised of an inner core layer 4 and an outer core layer 5. The patent recites that the outer core layer 5 may incorporate compressible material. See, Aoyama, column 2, lines 50-56 and column 3, lines 14-20. Specifically, Aoyama discloses the use of compressible material in the core of a golf ball, but more particularly in the outer core layer 5 of the core. Aoyama distinguishes between the cover 3 and the outer core layer 5. Aoyama recites that the outer core layer 5 is a part of the core 2 rather than part of the cover 3. See, Aoyama, column 3, lines 14-20. Thus, Aoyama fails to disclose ***"[a] ball comprising an outer skin, the outer skin including a first layer which includes a syntactic material,"*** wherein compressible microspheres are incorporated.

Accordingly, Applicant respectfully submits that independent claim 1 is patentable over Aoyama under 35 U.S.C. § 102(b). Because claims 3-7 and 11 depend directly from independent claim 1 and include all the limitations thereof, Applicant respectfully submits that these claims are patentable as well. Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1, 3-7, and 11 under 35 U.S.C. § 102(b) as being anticipated by Aoyama.

3. Claims 1, 3, 4, 6, 7, 9-12, and 24-27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Mills in view of Delacoste. Applicant respectfully traverses the rejection.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable

expectation of success must both be found in the prior art and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). MPEP § 706.02(j).

It is well settled that to combine references under 35 U.S.C. § 103, there must be some suggestion or motivation to do so stated in the references themselves or arising out of the knowledge generally available to one of ordinary skill in the art that lies outside the patent application. See, for example, MPEP § 2142. If there is no such motivation or suggestion, a 35 U.S.C. § 103(a) rejection is improper. As stated in MPEP § 2143.01, "the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art suggests the desirability of the combination." In re Mills, 916 F.2d 680, 16 USPQ 1430 (Fed. Cir. 1990). Furthermore, "[t]he examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. If the examiner does not produce a prima facie case, the applicant is under no obligation to submit evidence of nonobviousness." See, MPEP § 2141. As further stated in that section, "[w]hen the motivation to combine the teachings of the references is not immediately apparent, it is the duty of the examiner to explain why the combination of the teachings is proper." Ex parte Skinner, 2 USPQ2d 1788 (Bd. Pat. App. & Inter. 1986). In particular, "the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination." In Re Sang Su Lee, 277 F.3d 1338, 1343 (Fed. Cir. 2002) (quoting In Re Rouffet, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998)) (emphasis added). "The examiner can satisfy the burden of showing obviousness of the combination 'only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the

relevant teachings of the references.'" In Re Sang Su Lee, 277 F.3d 1338, 1343 (Fed. Cir. 2002) (quoting In Re Fritch, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992)).

Briefly, Mills describes a method of providing decorative and/or informative markings 15 on the outer covering 12, 13 of a sports ball 10. The sports ball 10 has an inflated or inflatable core 11, an outer covering 12, 13 enclosing the core 11, and a transparent cover layer 14 applied to the outer surface of the outer covering 12, 13. Decorative and/or informative markings 15 are provided at the interface between the internal face of the transparent cover layer 14 and the outer surface of the outer covering 12, 13. See generally, page 3, lines 10-17, of Mills.

Delacoste describes a cast aluminum ball mold and a method of making a thermoplastic ball in the mold. Specifically, Delacoste describes manufacturing a ball by introducing a thermoplastic material into two semi-spherical mold halves, thereby producing a single piece molded ball. See generally, column 6, lines 23-42, of Delacoste.

More particularly, Delacoste discloses that the outer layer incorporates glass micro-balls. Delacoste, column 3, lines 45-47. Specifically, Delacoste states ***"The ball deformation is also reduced by incorporating, in said external plastisol layer, fillers consisting notably of glass micro-balls. . . ."*** Delacoste, column 3, lines 45-47. As previously stated in section 1, "resilience" is the "[a]bility of a strained body, by virtue of high yield strength and low elastic modulus, to recover its size and form following deformation." McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS 1693 (5th ed. 1994). Delacoste specifically teaches away from the use of ***"resilient spherical bodies"*** in the external layer, as recited in independent claim 1, by disclosing the use of non-resilient, hard ***"glass micro-balls"*** to reduce ball deformation.

Further, Delacoste recites that the disclosed use of the micro-size spheres ***"is attended by a reduction in the ultimate elongation and by an increment in the compressive strength of the mixture, and also of the flexion module, the resistance to abrasion, and surface hardness and the rigidity, thus reducing the distortion of the external layer and increasing very slightly the tensile strength."*** Delacoste, column 3, lines 63-68 and column 4, lines 1-5. Glass, by its nature, is not a resilient material. Glass is defined as "a hard . . . brittle substance made by fusing silicates. . . ." MCGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS 854 (5th ed. 1994). Thus, Delacoste teaches the use of a rigid material, namely glass, and Delacoste specifically discloses that the use of glass will result in ***"surface hardness and . . . rigidity."*** In contrast, Applicant claims the use of ***"resilient spherical bodies."***

Applicant respectfully submits that a prima facie case of obviousness has not been established with respect to independent claim 1. As discussed hereinabove, neither Mills nor Delacoste, alone or in proper combination teach or suggest a ball having an outer skin ***"that comprises a plurality of resilient spherical bodies dispersed in a matrix material,"*** as recited in independent claim 1. Furthermore, there is nothing in the cited references to suggest or motivate one of ordinary skill in the art to make the combination stated in independent claim 1. Finally, the Office action does not state, with specificity, facts or arguments to support the proposition that one of ordinary skill in the art would combine Mills in view of Delacoste to arrive at the use of resilient spherical bodies.

In addition, Applicant respectfully submits that there is no suggestion or motivation, either in the references themselves or in the knowledge generally available in the art, to modify Mills in view of Delacoste, because such a combination would change the principle operation of

the references. As stated in MPEP § 2143.01, "If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious." In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). MPEP § 2143.01. The Office action's proposed modification of Delacoste would render the reference insufficient for its purpose, which is to incorporate glass micro-balls in the external layer in order to increase the rigidity and decrease distortion. Delacoste, column 3, lines 45-47 and column 4, lines 3-7. In In re Ratti, the Office action rejected claims pertaining to an oil seal comprising a bore where the claims were directed to "resilient spring fingers inserted in a resilient spring member." See, MPEP § 2143.01. The claims were rejected as obvious over a primary reference that taught an oil seal comprising a rigid bore. See, MPEP § 2143.01. However, in In re Ratti, the Office action rejection was reversed, because the "suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate." In re Ratti, 270 F.2d 810, 813, 123 USPQ 349, 352 (CCPA 1959). See, MPEP § 2143.01. Accordingly, Applicant submits that the proposed combination of Mills and Delacoste would render Delacoste insufficient for its claimed purpose. In particular, Applicant's claims are directed to the use of resilient micro-spheres, whereas the reference is directed to the use of rigid micro-balls.

Applicant, therefore, respectfully submits that independent claim 1 is patentable over Mills in view of Delacoste. Because claims 3, 4, 6, 7, 9-12, and 24-27 depend, either directly or indirectly, from independent claim 1 and include all the limitations thereof, Applicant

respectfully submits that these claims are also patentable. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1, 3, 4, 6, 7, 9-12, and 24-27 over Mills in view of Delacoste.

4. Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Mills in view of Delacoste and Aoyama. Applicant respectfully traverses the rejection.

Claim 5 depends directly from independent claim 1, which as discussed in section 3, is patentable over Mills in view of Delacoste. Aoyama fails to cure the deficiency of Delacoste.

As described in section 2, Aoyama discloses a golf ball comprising a compressible core material. In contrast, Applicant's claims pertain to the outer skin. In addition, Delacoste, as discussed in section 3, teaches an external layer comprising glass micro-balls. See, Delacoste, column 3, lines 45-47. In considering Aoyama and Delacoste in combination with one another, it is significant to note that Aoyama specifically discloses that ***"glass microspheres would not be appropriate . . . because of their rigidity"*** as a material to use in the core to allow compression to occur. See, Aoyama, column 4, lines 3-5. Accordingly, based on the principles discussed in section 3, the proposed modification of Mills in view of Delacoste and Aoyama would render both Aoyama and Delacoste insufficient for their respective purposes.

Applicant, therefore, respectfully submits that neither Mills nor Delacoste nor Aoyama, alone or in proper combination, provides the teaching, suggestion or motivation for one skilled in the art to arrive at ***"an outer skin . . . which includes a syntactic material that comprises a plurality of resilient spherical bodies dispersed in a matrix material,"*** as recited in independent claim 1. Because claim 5 depends directly from independent claim 1 and includes all the limitations thereof, claim 5 is patentable over Mills in view of Delacoste and Aoyama.

5. Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Mills in view of Delacoste and Kennedy. Applicant respectfully traverses the rejection.

Claim 8 depends indirectly from independent claim 1, which as discussed in section 3, is patentable over Mills in view of Delacoste. Applicant respectfully submits that Kennedy fails to cure the deficiencies of Mills and Delacoste.

Briefly, Kennedy describes a coating composition for game balls. The coating includes a film forming binder comprised of a linear saturated polyester polyol resin having an average equivalent weight of about 900 to about 1500, combined with an aliphatic polyisocyanate resin cross-linking agent, a fluorescent pigment which is present in the ratio of about 85-90 parts by weight per 100 parts by weight of the film binder (and/or about 80 to about 110 parts by weight per 100 parts by weight of polyester polyol resin), at least one compatible solvent, a texturizing agent and, in some instances, a flow control or leveling agent. See, column 2, lines 37-52, of Kennedy.

Applicant, therefore, respectfully submits that neither Mills nor Delacoste nor Kennedy, alone or in proper combination, provides the teaching, suggestion, or motivation for one skilled in the art to arrive at ***"an outer skin . . . which includes a syntactic material that comprises a plurality of resilient spherical bodies dispersed in a matrix material,"*** as recited in independent claim 1. Because claim 8 depends directly from independent claim 1 and includes all the limitations thereof, it is patentable over Mills in view of Delacoste and Kennedy.

6. Claims 9, 26, and 27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Aoyama. Applicant respectfully traverses the rejection.

Applicant respectfully submits that claims 9, 26, and 27 depend, either directly or indirectly, from independent claim 1, which as discussed in section 2, is not anticipated by Aoyama under 35 U.S.C. § 102(b). As described in section 2, Aoyama discloses a solid construction golf ball comprising a core of compressible material. See, Aoyama, column 2, lines 16-20. While Aoyama teaches a compressible core, it specifically states ***"The outer layer of the core which incorporates the compressible material is then either injection molded or compression molded around the center of the core. Finally, the cover would be injection molded or compression molded around the core by conventional means."*** Although Aoyama states, "it is intended that the appended claims cover all such modifications and embodiments as falling within the true spirit and scope of the present invention," the "spirit and scope" of Aoyama is as an invention that recites a compressible core surrounded by a hard cover. See, Aoyama, column 4, lines 64-67. In contrast, Applicant claims, an ***"outer skin"*** that ***"comprises a plurality of resilient spherical bodies,"*** as recited in independent claim 1. Furthermore, the Office action does not state, with specificity, any facts or arguments to support the proposition that one of ordinary skill in the art would be motivated to use resilient spherical bodies in an outer skin, based on Aoyama.

Accordingly, Applicant respectfully submits that Aoyama fails to teach, suggest, or motivate one skilled in the art to contemplate ***"[a] ball comprising an outer skin"*** that ***"includes a syntactic material that comprises a plurality of resilient spherical bodies dispersed in a matrix material,"*** as recited in independent claim 1. Because claims 9, 26, and 27 depend, either directly or indirectly, from independent claim 1 and include all the limitations thereof, they are patentable over Aoyama under 35 U.S.C. § 103(a).

7. Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Aoyama in view of Kennedy. Applicant respectfully traverses the rejection.

Claim 8 depends directly from independent claim 1, which as discussed in section 6, is patentable over Aoyama under 35 U.S.C. § 103(a). Kennedy, as described in section 5, fails to cure the deficiency of Aoyama.

Neither Aoyama nor Kennedy, alone or in proper combination, teaches or suggests ***"[a] ball comprising an outer skin"*** that ***"includes a syntactic material that comprises a plurality of resilient spherical bodies dispersed in a matrix material,"*** as recited in independent claim 1. Because claim 8 depends directly from independent claim 1 and includes all the limitations thereof, claim 8 is patentable over Aoyama in view of Kennedy.

CONCLUSION

In view of the foregoing, Applicant respectfully requests reconsideration, withdrawal of all grounds of rejection, and allowance of claims 1, 3-12, and 24-27 in due course. The Examiner is invited to contact Applicant's undersigned representative by telephone at the number listed below to discuss any outstanding issues.

Respectfully submitted,

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